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COMMITTEE OF EXPERTS ON THE
TRANSPORT OF DANGEROUS GOODS

Sub-Committee of Experts on the
Transport of Dangerous Goods

REPORT OF THE SUB-COMMITTEE OF EXPERTS ON ITS TENTH SESSION (Geneva, 10-20 July 1995)

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REPORT

ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its tenth session from 10 to 20 July 1995.

2. The session was attended by experts from the following countries: Argentina; Belgium; Brazil; Canada; China; France; Germany; India; Italy; Japan; Mexico; Netherlands; Norway; Poland; Russian Federation; Sweden; United Kingdom; United States of America.

3. Observers from Australia, Austria, Finland, Nigeria, Spain and Switzerland participated in accordance with rule 72 of the rules of procedure of the Economic and Social Council.

4. Representatives of the United Nations Environment Programme (UNEP) and of the following specialized agencies also attended: International Labour Organization (ILO), International Maritime Organization (IMO) and International Civil Aviation Organization (ICAO).

5. The following intergovernmental organizations were also represented: European Commission (EC), Central Office for International Railway Transport (OCTI) and the Organization for Cooperation between Railways (OSZHd).

6. Representatives of the following non-governmental organizations: International Organization for Standardization (ISO), European Chemical Industry Council (CEFIC), Hazardous Materials Advisory Council (HMAC), European Liquefied Petroleum Gas Association (AEGPL), International Air Transport Association (IATA), International Express Carriers Conference (IECC), International Confederation of Drum Reconditioners (ICDR), European Confederation of Paint, Printing Ink and Artists Colours manufacturers Associations (CEPE) and International Council on Metals and the Environment (ICME) took part in the discussions when items of concern to their organizations were considered.

ADOPTION OF THE AGENDA

7. The Sub-Committee adopted the provisional agenda prepared by the secretariat (ST/SG/AC.10/C.3/19 and -/Add.1), as amended for inclusion of papers submitted late (information document INF.2). As no document had been submitted under agenda items 6 (Review of Chapter 15) and 10 (Infectious substances), they were deleted from the agenda. The provisional timetable contained in document ST/SG/AC.10/C.3/19 was revised (information document INF.11).

ELECTION OF OFFICERS

8. The Committee of Experts at its eighteenth session had re-elected Mr. L. Grainger (United Kingdom) and Mr. J. Monteith (Canada) as Chairman and Vice-Chairman respectively for the biennium 1995-1996 (ST/SG/AC.10/21, para. 197).

9. The Chairman and the Vice-Chairman announced that, in the normal course of events, they would be retiring in 1997. Experts were invited to consider who would succeed them.

ADMINISTRATIVE MATTERS

10. The Director of the Transport Division of the Economic Commission for Europe, Mr. J. Capel Ferrer, welcomed participants. He announced that the Economic Commission for Europe had requested its Executive Secretary to allocate an additional professional post for work on the transport of dangerous goods (decision H(50) of 11 April 1995).

11. He also informed the Sub-Committee of the work done by the Preparatory Committee of the 1996 Regional Conference on Transport and the Environment, under the auspices of ECE in the context of the follow-up to the United Nations Conference on Environment and Development (UNCED, Rio de Janeiro, June 1992). Draft guidelines for a common strategy for transport and the environment included a chapter V on the transport of dangerous goods and dangerous wastes. The Conference was to take place in 1996 (from 30 September to 4 October, if it were held in Geneva).

12. He announced that the ninth revised edition of the Recommendations on the Transport of

Dangerous Goods had already appeared in English and was ready for printing in French. The Manual of Tests and Criteria would appear in the autumn.

13. Where the work of the Sub-Committee was concerned, he stressed the importance of effective cooperation between the Sub-Committee and the competent bodies of ECE and other modal organizations, particularly in order to prepare a model regulation on the transport of dangerous goods. He recalled that the main justification for this new work was to present the Recommendations in the form of a model regulation, annexed to a basic recommendation which could be directly integrated into all national or international regulations so as to make for improved harmonization and facilitate the regular updating of all of the relevant instruments, thus considerably lightening the workload of the secretariats of the organizations concerned and of administrations. However, this work could be successfully completed and give results only if Governments showed firm political resolve within the international bodies as well as nationally to effectively adapt the regulations in question to this model regulation.

REVIEW OF CHAPTER 12 AND OF THE MULTIMODAL TANK TABLES

Documents: ST/SG/AC.10/21, paras. 80 to 83 (Report of the Committee on its eighteenth session
ST/SG/AC.10/C.3/R.595 (Report of the Working Group on Multimodal Portable Tanks which met during the eighteenth session of the Committee)
ST/SG/AC.10/C.3/18/Add.4 and
ST/SG/AC.10/C.3/R.595/Add.1 (Draft text for chapter 12, paras. 12.1 to 12.23.2)
ST/SG/AC.10/C.3/R.570 and -/R.629 (IMO) (Comments by the IMO Working Group on Portable Tanks)
ST/SG/AC.10/C.3/R.591 and -/R.618 (United States) (A rationalized approach to assigning portable tank requirements to substances of Classes 3 through 9)
ST/SG/AC.10/R.450 and -/C.3/R.646 (France) (Requirements for non refrigerated liquefied gases)
ST/SG/AC.10/C.3/R.608 (Belgium) (Methylal)
ST/SG/AC.10/C.3/R.621 (United States) (Minimum thickness for portable tanks)
ST/SG/AC.10/C.3/R.614 (Germany) (Degree of filling for tanks)
Informal documents: INF.3 (CEFIC) (Tank-containers for the transport of organic peroxides)

INF.4 (Germany) (Explosion pressure proof design)
INF.5 (Germany) (Reference mild steel)
INF.29 (Belgium) (Comments on draft chapter 12)

14. The Chairman recalled that the Committee had decided that the Working Group on Portable Tanks should continue its work during the biennium 1995-1996, and that a session of this Working Group had therefore been planned for 10 to 14 July in parallel with the session of the Sub-Committee. He invited the Chairman of the Working Group, Mr. B. Schulz-Forberg (Germany) to introduce the report of the last Working Group session (ST/SG/AC.10/C.3/R.595 and -/Add.1).

15. The Chairman of the Working Group summed up the state of progress of its work and stressed that the decision to restructure the Recommendations as a model regulation should in future also be taken into account in revising the chapters concerning transport in tanks. He asked whether those chapters should be considered as still applying as was the case at present, only to multimodal transport in portable tanks or whether it was necessary, in the context of a model regulation, to study all the possible cases which might be found in national regulations, particularly in terms of climate, etc.

16. The Chairman said that in his opinion chapter 12 should continue to apply only to multimodal tanks used worldwide. The expert from Canada said that he hoped, however, that account would also be taken of the extreme temperatures which could exist in certain countries and he offered to prepare a document for the next session. The question of alternate arrangements was deferred to the next session.

17. The Chairman of the Working Group also said that the Working Group would study the question of types of tanks, a leakproofness test, the use of mild steel, explosion pressure proof design, frangible discs, the F insulation coefficient, approval of tanks (by substances or groups of substances), a rationalized approach to assigning requirements and the list of substances and requirements applicable, as well as tanks for gases. That work could be carried out during the present biennium.

18. The expert from the United States enquired about the schedule of work on tanks for refrigerated gases, particularly if this work could be completed during the current biennium. He

also expressed the hope that questions concerning the list of dangerous goods which could be carried in tanks and the assignment of requirements applicable to tanks in terms of the substances transported would be discussed separately either by the Sub-Committee or by a special group, since the Working Group comprised mainly construction experts.

19. The Chairman said that the question of refrigerated liquefied gases could be studied in this biennium, since the expert from France had a draft proposal which was well advanced. It would be possible to return to the question of the list in the next session to see whether a special group was necessary. It was decided meanwhile to transmit document ST/SG/AC.10/C.3/R.618 to the Working Group for an opinion.

20. All the documentation was transmitted to the Working Group.

Application by the European Portable Tank Association (EPTA) for consultative status

Document: ST/SG/AC.10/C.3/R.645 (secretariat)

21. A representative of EPTA described his Association's activities and expressed its wish to take part on a consultative basis in the work of the Sub-Committee and the Committee on matters within its competence.

22. The Chairman recalled that, as a matter of principle, in view of the worldwide scope of its work, the Committee and Sub-Committee preferred to give accreditation to non-governmental organizations of international rather than regional standing, but that the Sub-Committee should not fail to take advantage of industrial expertise if such organizations did not exist internationally.

23. The representative of EPTA said that he had contacted the International Tank Container Association, the headquarters of which was in the United States, but that Association had not yet decided whether to request consultative status.

24. The expert from the United States said that if consultative status was granted to EPTA, he would request similar status for the Tank Container Association of the United States so as to ensure a fair geographical distribution of the industry's interests.

25. The Chairman said that the type of situation where the views of a particular sector of the industry were not coordinated was precisely what he wished to avoid. National or regional associations should be encouraged to form international organizations so as to submit coherent views to the Sub-Committee.

26. It was decided to postpone consideration of this application until the next session. The representative of EPTA was able to take part in the work of the Working Group as a member of the United Kingdom delegation.

Report of the Working Group on Portable Tanks

27. The Chairman of the Working Group on Portable Tanks introduced the Working Group's report, which is reproduced in Addendum 1 to this report (ST/SG/AC.10/C.3/20/Add.1). He said that a number of questions of principle had still not been settled, particularly the concept of "alternate arrangements", and that the Sub-Committee should take clear decisions on those questions. Unresolved questions were indicated by texts in square brackets in the draft revision of Chapter 12.

28. The Chairman asked the experts of the Sub-Committee to study the report carefully in order to be able to take final decisions on the questions of principle at the December 1995 session.

29. The discussion of documents ST/SG/AC.10/C.3/R.624 (Germany) and -/C.3/R.646 (France) was postponed until the next session.

30. Document ST/SG/AC.10/C.3/R.618 (United States) should also be the subject of a discussion and of a decision of principle by the Sub-Committee at its next session. An ad hoc group of experts, with an appropriate knowledge of chemistry, could be set up during the next session to study the implications of the principles for assigning requirements for transport in tanks to the list contained in Chapter 12.

31. Discussion of document ST/SG/AC.10/C.3/R.608 was postponed until the next session. According to the data furnished (maximum vapour pressure of 103.4 kPa at 50° C according to the modified test method ASTM D 323), the minimum test pressure for the transport of this

substance (UN 1234 Methylal) should be 2.65 bar, not 4 bar. The expert from Germany confirmed the value given by the expert from Belgium, but other experts expressed doubts.

32. The expert from the United States proposed holding an informal session of the Working Group on Portable Tanks in Atlanta in the last week of March 1996 so as to expedite its work. That proposal was adopted on the understanding that the report of that intersessional meeting would be circulated immediately after the meeting in accordance with the deadline for submitting documents for the July 1996 Sub-Committee session. The Working Group would also meet during the Sub-Committee's December 1995 session.

33. The issues to be addressed by the Sub-Committee during the first day of the eleventh session, as requested by the group, are summarized as follows :

(1) Alternate arrangements, as noted in ST/SG/AC.10/C.3/R.595;

(2) Use of tank types in the Recommendations;

(3) Paragraph 12.19.1 and the necessity to identify substances or group of substances on the design approval certificate;

(4) Rationalized approach for the assignment of substances to the tank table (-C.3/R.618);

(5) 4g impact test in paragraph 12.19.2.1;

(6) Lower volume limit for portable tanks intended to transport pressure liquefied gases (450 litres or 1000 litres) in paragraph 12.24.2; and

(7) Introduction of explosion pressure proof tanks in paragraph 12.3.10.

LISTING AND PACKING OF EXPLOSIVE SUBSTANCES AND ARTICLES

Charges, shaped, commercial

Document: ST/SG/AC.10/C.3/R.598 (Norway)

34. The proposal to delete the adjective "commercial" from the names of entries UN 0059, UN 0439, UN 0440 and UN 0441 was adopted, so that those names could be used for the transport of military shaped charges (see annex 1). In particular, it was pointed out that, although the international conventions governing the transport of dangerous goods, such as the SOLAS Convention, ADR or COTIF were not applicable to transport under the responsibility of the armed forces, many international transport operations involving military explosives were carried out using civilian vehicles which were not under the responsibility of the armed forces.

Oversized packagings and transport, packaging and dispensing units

Document: ST/SG/AC.10/C.3/R.601 (Germany, Norway, United Kingdom, Sweden)

35. This document was submitted by the expert from Norway as a first approach to the question of packaging for explosives with a net mass of more than 400 kg.

36. Some experts wondered why new packing methods needed to be defined for such articles since in their opinion it was possible to use the EP30 method and the provision contained in paragraph 4.8.2.14. Other experts were of the opinion that IBCs could also be used, although chapter 16 had been specifically drafted for the transport of substances in bulk.

37. It was finally decided to return to the question at the twelfth session of the Sub-Committee (July 1996). Meanwhile, interested experts were requested to send their written comments to the expert from Norway. An informal working group might possibly be organized for them.

Blasting explosives in IBCs

Document: ST/SG/AC.10/C.3/R.612 (France)

38. This proposal, to identify more clearly than in special provisions 260 and 261 blasting explosives which could be carried in packagings and those which could be carried in IBCs by allocating a reference number to them corresponding to the detailed definitions set out in the glossary, was not considered essential and was not adopted.

Fuse, non-detonating

Document: ST/SG/AC.10/C.3/R.630 (Germany)

39. The proposal to amend the definition of fuse, non-detonating in the glossary had become unnecessary since the amendment had been made by the secretariat in the ninth revised edition of the Recommendations on the basis of a decision by the Sub-Committee at its ninth session (ST/SG/AC.10/C.3/18, para. 17); this decision had not been reflected in the annexes to the report.

List of competent authorities for explosives

Document: ST/SG/AC.10/C.3/R.644 (United States)

40. The proposal to draw up a list of competent authorities for the classification of explosives in each country was withdrawn by the expert from the United States. The discussion showed that it would probably be difficult to obtain a complete list and keep it up to date, and that the normal procedure in the event of a problem in the classification of "imported" products should be to consult the competent transport authorities.

LISTING AND CLASSIFICATION OF REACTIVE MATERIALS AND RELATED TEST METHODS AND CRITERIA

Classification of desensitized explosives in Division 4.1

Documents: ST/SG/AC.10/C.3/R.604 (Germany)
ST/SG/AC.10/C.3/R.605 (Germany)
ST/SG/AC.10/C.3/R.606 (Germany)

41. The proposals by the expert from Germany were for the introduction of new entries, including n.o.s. entries, for the transport of explosives in the non-explosive state, in particular various nitroglycerin or pentaerythrite mixtures or solutions transported internationally as intermediate products for the manufacture of various pharmaceutical preparations.

The international transport of those substances under the conditions applicable to Division 4.1 could take place only with the agreement of the various competent authorities, which did not facilitate trade and encouraged the industry to classify them under the entry "UN 1325, flammable solids, n.o.s.", which was not desirable from the safety point of view.

42. While recognizing the problem, a number of experts feared a proliferation of entries for this type of preparation and expressed the hope that a more comprehensive solution would be found to the problem of reclassifying explosives in the non-explosive state in Division 4.1, for example, with a system of appropriate generic entries. Where nitroglycerin was concerned, the connection with entry UN 3319 should also be studied and the effects which these proposals could have on the classification of blasting explosives fully appreciated.

43. The expert from United Kingdom was also concerned that the test data only referred to a test 6 (c) on a single package, rather than on three packages as required by the Manual of Tests and Criteria.

44. The representative of CEFIC recalled that three conditions existed for excluding such substances from Class 1 and classifying them in Division 4.1, namely, they must be compatible with the other explosives, there could be no leakage under normal transport conditions and, as packaged, they must meet the criteria of test 6 (c).

45. The expert from Canada suggested that it would also be as well to define criteria for packing groups I and II, since at present all desensitized explosives of Division 4.1 belonged to packing group I.

46. The expert from Germany said that he would review the question overall in the light of the comments made.

Tests relating to classification of explosives

Documents: ST/SG/AC.10/R.499 and -/R.500 (Russian Federation)

47. The discussion of these two documents submitted to the Committee at its eighteenth session had been postponed until the present biennium (ST/SG/AC.10/21, para. 21). The expert

from the Russian Federation requested that consideration of document -/R.499 should be postponed until the July 1996 session and submitted an informal document INF.30 correcting document -/R.500, which he also asked to have reproduced officially for the July 1996 session.

48. Various experts pointed out that these documents described tests and test results but were not accompanied by specific proposals for the addition of a new test to the Manual of Tests and Criteria or amendments to the classification procedure. If it was a question of defining a new test, it would be necessary in the case of the proposal contained in document -/R.500 to define its relationship with test series 5, and to provide information on the blasting explosives used. It was also pointed out that these tests were carried out on a very large scale, which would raise practical difficulties for laboratories doing routine tests.

49. The expert from the Russian Federation was invited to prepare an addendum to the proposals containing specific proposals for amendments to the Recommendations.

Test series 6 (c)

Documents: ST/SG/AC.10/C.3/R.529 (secretariat) (OECD-IGUS) and informal document INF.8
ST/SG/AC.10/C.3/R.602 (Canada) and informal document INF.24
ST/SG/AC.10/C.3/R.613 (France) and informal document INF.12
ST/SG/AC.10/C.3/R.641 (United States) and informal document INF.13

50. Documents ST/SG/AC.10/C.3/R.529, -/C.3/R.602, -/C.3/R.613 and -/C.3/R.641 contained proposed amendments concerning test series 6 (c) to mitigate some problems of interpretation by giving the text greater clarity, precision (limit value for blast effects and projection energies, standardization of the quality of aluminium witness screens, rules for the evaluation of heat flow density) and consistency (levels of effects at hazard division boundaries, compatibility of the hazards incurred with the definitions). These documents were the subject of an in-depth exchange of views.

51. The Chairman recalled that test 6 (c) was the key test for assignment to a hazard division of Class 1 and for exemption from the conditions of Class 1. The development of the test had required considerable efforts and several years of work and, even though it might not be perfect,

it permitted commonly transported products to be classified. The Committee had agreed at its eighteenth session to review this test following the discussions on the rationalization of the Manual of Tests and Criteria, but gave no particular priority to the matter.

52. It was also pointed out that OECD-IGUS had withdrawn its proposal (ST/SG/AC.10/C.3/R.529) in order to request the Sub-Committee to take a decision on a five-point action programme.

53. The proposed programme was studied by an ad hoc group of experts (Australia, Canada, France, Germany, Italy, Japan, Netherlands, Norway, Sweden, United Kingdom, United States, CEFIC, HMAC), chaired by the expert from the United States. The conclusions of that group were taken up by the Sub-Committee (see annex 2).

54. The expert from Canada offered to host a working group (if necessary) in Ottawa in the late summer of 1996 on the subject. The Sub-Committee agreed to further assess the need of such a working group at the July 1996 session.

New harmonized pressure vessel tests

Document: ST/SG/AC.10/C.3/R.603 (Japan)

55. The Sub-Committee supported generally the principles set out in the document on international harmonization of the pressure vessel test and encouraged the expert from Japan to continue his work on identifying concrete test and evaluation methods and to submit them to the Sub-Committee at its twelfth session in July 1996.

Criteria for classification of aqueous solutions of inorganic substances of Division 5.1

Document: ST/SG/AC.10/C.3/R.609 (HMAC)

56. The proposal to amend special provision 270 was not adopted, although it was supported by a number of delegations.

Self-reactive substances possessing oxidizing properties

Document: ST/SG/AC.10/R.460 (Germany)

57. The proposed amendment to paragraph 14.2.2.1 was intended to specify that substances possessing self-reactive properties and oxidizing properties should be considered as self-reactive substances of Division 4.1.

58. The expert from the United States said that this proposal was contrary to the principle contained in paragraph 14.2.2.1.1 whereby, on the contrary, such substances should not be considered as substances of Division 4.1. He asked how self-reactive substances possessing oxidizing properties of the level of packing group I would be classified if the proposal were adopted.

59. The expert from Canada wondered whether substances possessing such properties actually existed and were transported.

60. The representative of HMAC said that the exclusion of oxidizing substances from paragraph 14.2.2.1.1 was intentional. The expert from France supported the opinion of HMAC and said that the proposal by Germany would raise the problem of the reclassification of substances.

61. The expert from Germany said that, according to paragraph 1.44, the hazard of self-reactivity took precedence over that of oxidization, and that the asterisk footnote to table 1.1 implied that the precedence of hazard table was not applicable to the hazard of self-reactivity. He took note of the comments made and said that he would reconsider the problem and provide examples.

Reclassification of di-tert-butyl peroxide

Document: ST/SG/AC.10/R.485 (CEFIC)

62. This document was withdrawn, since CEFIC intended to prepare a new proposal for the next session.

CLASS 2 MATTERS (INCLUDING ISO WORK ON STANDARDS FOR GAS CYLINDERS

AND QUALITY ASSURANCE)

Aerosols with subsidiary risks

Document: ST/SG/AC.10/C.3/R.590 (United States)

63. The intention of the proposal was to revise special provision 63 to specify how subsidiary risks should be assigned to aerosols (following questions raised by ICAO regarding cases in which the substance contained in the aerosol met the criteria of Division 6.1 or Class 8). It was also intended to amend the flammability criteria to make them compatible with those set out in the ICAO Technical Instructions.

64. Several experts were of the opinion that it was premature to amend provision 63 in so far as work on the full harmonization of all the criteria of toxicity, corrosiveness, flammability, etc. was currently being done as part of the follow-up to Agenda 21 (see paragraphs 158 to 189).

65. Other experts made comments of a technical nature on the proposal, for example, why only toxicity of vapours by inhalation was taken into account and not that of dusts and mists, or why small-capacity receptacles were not taken into account.

66. The expert from the Netherlands also pointed out that most of the aerosols concerned were exempt, either under the provisions of chapter 15, or under RID and ADR in Europe, or under the IMDG Code which classified aerosols of less than 1 litre in Class 9. In light of this a simple uniform solution for the classification of aerosols would be preferable. It was however pointed out that this level of exemption did not exist in the ICAO Technical Instructions.

67. The expert from the United States withdrew his proposal from this agenda item, recalling that it corresponded to a need expressed by ICAO and that he would discuss the question with that Organization. He asked that the document be retained for the discussion on criteria for aerosols, as the document proposed performance criteria for flammable aerosols (see also Addendum 2 to this report).

Document: ST/SG/AC.10/C.3/R.622 (Argentina)

68. The proposal to transfer aerosols of a capacity of 1 litre or less to Class 9, as in the IMDG Code, received no support and was therefore not adopted.

69. The Sub-Committee recalled that the intention of IMO's decision to include aerosols with a capacity of 1 litre or less in class 9 was to address a stowage problem on board ship. This IMO decision had been reflected in special provision 197 but it had not been accepted to extend it to other modes of transport in the UN Recommendations.

70. The Chairman indicated that the Sub-Committee did not use, in principle, the same UN Number in more than one class. He invited the IMO secretariat to ensure that the Sub-Committee's view on the matter was reported to the relevant IMO Sub-Committee.

71. The representative of IMO said that, if Governments considered that the classification of those aerosols in Class 9 of the IMDG Code raised practical problems, they should submit appropriate proposals to IMO themselves.

Work of ISO

Documents: ST/SG/AC.10/C.3/R.631 (secretariat)
Informal document INF.7 (ISO)

72. The Sub-Committee received information on the work of Technical Committee ISO/TC 58 and the deadlines established for comments on the various draft standards applicable to gas cylinders, in particular ISO/DIS 11114 (Compatibility of cylinder and valve materials with gas contents, Part 1 (Metallic materials) and Part 3 (Test methods)).

73. The expert from the Netherlands recalled that with reference to draft standard ISO 10 298 (determination of the toxicity of a gas or a mixture of gases) and ISO 13 338 (determination of the corrosiveness of a gas or a mixture of gases for textiles), there were

differences between the criteria of the United Nations Recommendations and the draft standards, and that it would not be possible to refer to the standards if the criteria contained in the Recommendations were not correctly reflected. Account should also be taken of the work on global harmonization.

ROUTINE LISTING AND CLASSIFICATION

Classification based on human experience

Document: ST/SG/AC.10/C.3/R.488 (HMAC)

74. The HMAC document opened the discussion on the problem of substances classified as dangerous on the basis of human experience, as opposed to those classified according to experimental criteria since, in the list contained in chapter 2 of the Recommendations, it is not easy to distinguish the substances classified as toxic or corrosive on the basis of actual accidents and those classified according to criteria which have evolved in the course of time but have not been reclassified. The representative of CEFIC pointed out in this regard that half of the substances classified in Division 6.1 did not meet the classification criteria.

75. The Sub-Committee accepted HMAC's offer to prepare specific proposals to identify substances classified on the basis of human experience and those not reclassified even though criteria had changed. The Sub-Committee encouraged participants to submit comments and data on this subject to HMAC. In the context of the global harmonization of classification and labelling systems, it would be necessary to reach a consensus on the substances already classified - considered to be those most commonly transported - to ensure effective harmonization.

Classification of pesticides

Document: ST/SG/AC.10/R.471 (secretariat)

76. The Committee had already considered this document (ST/SG/AC.10/21, paras. 53 and 54) and had invited the Sub-Committee to study the secretariat's proposals once a check for accuracy had been made. Since the delegations which had promised comments had not submitted them, the Sub-Committee invited them to transmit them directly to the secretariat as rapidly as possible so that a proposed update of table 6.1 could be prepared. The expert from Germany offered to submit a comprehensive list of pesticides to the secretariat taking account of the latest developments at the World Health Organization (WHO).

77. Where remarks 3, 4 and 5 were concerned, it was agreed that pesticides not listed in the

Guidelines of the WHO ("Recommended classification of Pesticides by Hazard and Guidelines to classification"), those considered obsolete and no longer on the market, and those for which the toxicity data indicated that they did not come within the scope of the transport regulations, should be deleted.

78. It should be pointed out that remark 1 did not refer to the pure substance but to pesticides based on it.

79. It was not the right moment to take any action on remarks 7 and 8 since the work of global harmonization had not been completed and remark 6 (new entries for pyrethroids) should be made the subject of a specific proposal after consultation with WHO.

80. The secretariat should also consult WHO with reference to the 1996-1997 version of the list to be issued.

81. The expert from the United States said that in view of the frequent updating of the WHO list he hoped that table 6.1 would be deleted in the future and that responsibility for the correct assignment of proper shipping names for pesticides would be entrusted solely to manufacturers.

Elevated temperature liquids

Document: ST/SG/AC.10/C.3/R.597 (United Kingdom)

82. The proposal by the United Kingdom was adopted with an addition specifying that entry UN 3257 included molten metals and salts (see annex 1).

UN 2344 - Bromopropanes

Document: ST/SG/AC.10/C.3/R.607 (Belgium)

83. The proposal to assign special provision 184 to entry UN 2344 (i.e. packing groups II or III) instead of to packing group II was adopted (see annex 1).

UN 2371 - Isopentenes

Document: ST/SG/AC.10/C.3/R.615 (China)

84. The proposal to delete entry 2371 and to keep only the entries covering the three isomers of isopentene (UN 2459, UN 2460, UN 2561) was not adopted. It was pointed out that the packing group was not the same for all the isomers (II for UN 2460 and I for UN 2459 and UN 2561), nor were the conditions of transport in tanks (6 bar for UN 2561 and 4 bar for UN 2459 and UN 2460). It was therefore necessary to keep the entries separate. The entry UN 2371 could be used for mixtures of isomers.

Report of the IMO Editorial and Technical Group on Classification Issues

Document: ST/SG/AC.10/C.3/R.628 (IMO)

85. The Sub-Committee considered the proposals and suggestions by IMO and reached the following conclusions:

UN 1973 - Mixtures of chlorodifluoromethane and chloropentafluoroethane

86. The experts from Germany, Belgium, France and the United Kingdom confirmed that industry used the name "R 502" for this refrigerant gas which was an azeotropic mixture and that the term R 22/115 was therefore not appropriate.

Definitions of "refrigerated" and "refrigerant"

87. The majority of experts considered these terms to be sufficiently explicit and were not in favour of introducing definitions since it would then be necessary to define many other terms. The expert from Germany was invited to submit a written proposal if he considered that definitions were necessary.

Classification of phosphorus trichloride

88. It was recalled that this substance had been transferred from Class 8 to Division 6.1 on the

basis of a duly completed data sheet and that proposals to transfer phosphorus pentoxide and phosphorus trioxide of Class 8 to Division 6.1 had not been implemented since the data on toxicity would not have justified such a move.

89. All requests for reclassification must be justified by the appropriate data sheets. The Sub-Committee was not, as a matter of principle, in favour of going back on a decision taken six months earlier by the Committee, particularly in the context of classification, until the work of global harmonization had been completed.

Packing group I for entry UN 3147

90. It was recalled that special provision 185 had been assigned to entry UN 2801 (dye, liquid, corrosive, n.o.s.) since it had emerged that some of these dyes came under packing group I. Since the industry had not indicated any similar cases for solid dyes, only packing groups II and III had been anticipated for entry UN 3147. The Sub-Committee, however, accepted IMO's suggestion to assign solid dyes to packing group I (see annex 1).

Fumigation warning signs

91. The Sub-Committee noted the information provided by IMO that there was always a danger from containers carrying a cargo which had been fumigated, even if those containers were properly ventilated. It would be possible to amend paragraph 13.11.1 to warn that precautions should be taken, if proposals along those lines were submitted.

UN No. 3314 - Plastics moulding compound

92. For packing methods, the representative of IMO was invited to consult the representative of ICAO since the original proposal had been made for the purposes of air transport.

Classification of xanthates

Document: ST/SG/AC.10/C.3/R.633 (Australia) and informal document INF.26

93. The proposal for the classification of xanthates was favourably received by the Sub-

Committee which considered, however, that it was not sufficiently well documented, particularly with regard to the subsidiary toxicity risk. The observer for Australia was invited to revise the proposal and the experts from Canada and Germany to assist him in this task by furnishing the necessary data.

Proper shipping names for radioactive materials

Document: ST/SG/AC.10/C.3/R.642 (United States)

94. This proposal called in question the Committee's decisions at its eighteenth session, in particular the concept of "special form", considered essential in the United States for emergency action in the event of an accident.

95. Several experts said that they regretted the reopening of discussions on decisions taken in cooperation with IAEA.

96. Since the document was a late submission, the Sub-Committee decided to postpone its discussion until the next session.

Special provision 230

Informal document: INF.34 (United States)

97. A proposed amendment to special provision 230 concerning the classification of lithium cells was adopted (see annex 1).

PACKAGINGS AND INTERMEDIATE BULK CONTAINERS (IBCs)

Definitions and criteria for the tightness of packages and IBCs

Document: ST/SG/AC.10/C.3/R.552 (Germany)

98. The expert from Germany requested that his proposal ST/SG/AC.10/C.3/R.552 should be postponed until the next session. Additions would be made to it in order to take into account

work done on the matter by ISO.

Document: ST/SG/AC.10/C.3/R.623 (Argentina)

99. Most of the experts considered that the case of the leakproofness of packagings intended for the transport of reactive solid substances was a special case which should be settled in the appropriate packing provisions of the modal regulations. The proposal was not adopted.

Drop-height correction for combination packagings

Document: ST/SG/AC.10/C.3/R.611 (Belgium)

100. While they understood the reasons for this proposal, most of the experts considered that it would be advisable not to introduce excessively detailed provisions on performance of tests, since those provisions were rather the concern of the standardization bodies. The problem raised should be settled, if necessary, by introducing a more general provision. The proposal was not adopted.

Editorial review of Chapter 16

Document: ST/SG/AC.10/C.3/R.616 (Brazil)

101. The proposal to restructure Chapter 16 was adopted. It was agreed to consider the details at the eleventh session (December 1995).

Certification of packagings and IBCs

Document: ST/SG/AC.10/C.3/R.626 (Argentina)

102. The proposal by the expert from Argentina raised the question of the mutual acceptance of packagings used in international transport or manufactured and certified in a country other than that in which they were used, or manufactured in one country and certified in another.

103. The expert from Argentina proposed that, when, a certificate was issued by a country

other than the manufacturing country, a copy should be sent to the competent authority of the manufacturing country, and also that a copy should be attached to transport documents for international transport.

104. It was recalled that the marking on packagings indicated the country which had approved them and that, in the event of a problem, it was sufficient to contact the competent authority of that country. The measures proposed by the expert from Argentina would complicate administrative procedures, would increase the volume of transport documents and would not prevent fraud since it was easier to falsify certificates than packaging markings. The proposal was not adopted.

Document: ST/SG/AC.10/C.3/R.638 (Argentina)

105. Several experts considered that it was impracticable to require all the substances which could be carried in an IBC to be included in a packaging test report. A number of factors, such as the compatibility of the IBC with the substance carried, could not, in fact, be verified at the test procedure and design type certification stage, while conditions of transport, such as authorization to use a particular type of IBC for a specific substance, varied from one transport mode to another.

106. The proposal by the expert from Argentina was not adopted. It was, however, recalled that it was planned, during the second stage of reformatting, to add to the Recommendations provisions as to which packing methods could be used.

Report of the Editorial and Technical Group of IMO

Document: ST/SG/AC.10/C.3/R.627 (IMO)

Packagings for azodicarbonamide and muskxylene

107. The Chairman said that he had provided the Secretary of IMO with the necessary information to justify the discrepancy in packing methods for these two substances.

Intermediate bulk containers

108. The Sub-Committee noted that IMO was studying the possibility of using composite IBCs with flexible plastics inner receptacles for maritime transport, but that the final decision would be taken by the IMO Sub-Committee on Dangerous Goods and Solid Cargoes (DSC Sub-Committee).

Report of the Editorial and Technical Group of IMO

Salvage packagings

109. The Sub-Committee took note of the discussions of IMO's Editorial and Technical Group on this subject. The Sub-Committee had discussed the same questions as were raised by the Group during an earlier biennium, and the new provisions of Chapters 9 to 13 of the ninth revised edition of the Recommendations represented the Committee's conclusions.

Plastics drum reconditioning and recycling

Document: ST/SG/AC.10/C.3/R.632 (ICDR)

110. This proposal to permit the use of remanufactured or reconditioned plastics packagings or packagings manufactured from recycled plastics material for the transport of dangerous goods was motivated by public policy on the conservation of natural resources and energy.

111. The proposal concerning reconditioned packagings (para. 7) was adopted (see annex 1).

112. The proposal concerning remanufactured packagings was not adopted. Several experts requested additional explanations on remanufacturing methods. Other experts did not wish such provisions to be applied to jerricans. Others stressed the problems of the permitted period of use, restricted to 5 years, the deterioration of the quality of old plastics, and tests for chemical compatibility with plastics materials.

113. The proposal concerning the possibility of using recycled plastics materials to manufacture plastics drums and jerricans was provisionally adopted, with some amendments (see annex 1).

114. The expert from Germany stressed the importance of the reference to a quality assurance

programme recognized by the competent authority, and drew attention to his document ST/SG/AC.10/R.472 which he asked to be included in the agenda for the next session.

REFORMATTING OF THE RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Documents:	ST/SG/AC.10/C.3/R.596 (HMAC)	(Principles for reformatting)
	ST/SG/AC.10/C.3/R.599 (Netherlands)	(Systematic list of substances)
	ST/SG/AC.10/C.3/R.625 (secretariat)	(Report of the Working group on reformatting the Recommendations)
	ST/SG/AC.10/C.3/R.614 (China)	(Systematic numbering of UN entries)
	ST/SG/AC.10/C.3/R.619 (United States)	(List of substances in the
	ST/SG/AC.10/C.3/R.639 (secretariat)	reformatted Recommendations)
	Informal documents INF.6 and -/Add.1	(Australia) (Reformatting Australian Dangerous Goods Regulations)
	Informal documents INF.20 and -/Add.1 to -/Add.3 (secretariat)	(Work of the Working Group on restructuring ADR and RID)

115. The expert from Italy, as Chairman of the Working Group on reformatting the Recommendations, introduced the report of the Group, which had met in Geneva on 30 and 31 March 1995, and proposed that the Sub-Committee should take a decision on the draft structure set out in annex 2 to document ST/SG/AC.10/C.3/R.625 and the issues raised in paragraph 47.

Numerical/alphabetical order of the table in Part 3

116. Documents ST/SG/AC.10/C.3/R.619 (United States) and -/C.3/R.639 (secretariat) concerned the question of whether the main table in part 3, giving the list of substances, packing group and name, UN No, class or division, subsidiary risk, packing group and references to special or operational provisions (limited quantities, packing instructions and tank instructions), should appear in alphabetical or numerical order, on the understanding that in either case a

second list would be included which would give the UN Nos. and corresponding names, or vice versa.

117. Some experts supported the opinion of the expert from the United States that a presentation in alphabetical order would be preferable, for the reasons set out in paragraph 8 of the Group's report, namely, to make identification of the dangerous goods in the list easier for users in general.

118. The representative of ICAO said that, whatever solution was adopted, her Organization had already decided to keep its presentation in alphabetical order, as this had proven to be the most user-friendly format for all users, not just for regulators. She also pointed out that computer software are being developed which would allow ICAO to convert tables from English alphabetical order to alphabetical order in other languages. With regard to emergency response information, ICAO assisted the user by providing two listings in both alphabetical and numerical order, so that the user could choose the more suitable format in an emergency.

119. In introducing document ST/SG/AC.10/C.3/R.639, a secretariat official stressed the financial implications which the adoption of a presentation in alphabetical order would have for the United Nations, in so far as, with the means currently available, transposing the tables from the English alphabetical order into the alphabetical order of the other five official languages would mean a very considerable additional workload for the translation services, unless, of course, the appropriate computer software was made available to the secretariat for all the official languages.

120. He added that the problem would not arise for countries which used one of the United Nations languages as their official language since they could use the secretariat's tables, nor for marine or air transport since the languages used in the regulations and by the operators were mainly English or another of the official languages of IMO or ICAO. However, since this was a model regulation intended for all Governments, the problem would arise in domestic transport regulations for the many countries which would have to incorporate it into their regulations in their own language, while a presentation in numerical order would allow them to transpose the tables very easily.

121. Several experts and the representative of OCTI shared the secretariat's opinion.

122. The representative of IMO said that while she appreciated the size of the task which preparing the alphabetical index involved for the translation services in her Organization, it was recognized that in many of the countries implementing the IMDG Code shippers were not familiar with using UN numbers and often only recognized chemical names. In considering the needs of the shippers to be the priority, IMO preferred a presentation in alphabetical order.

123. The question was put to the vote and 12 experts were in favour of a presentation in numerical order, which was therefore the presentation adopted for the main table in part 3, on the understanding that there would also be an alphabetical index in the form of an appendix. The Chairman noted the level of support for an alphabetical list and considered that the Committee should come back to this issue in another biennium.

Use of the terms "shall" or "must" instead of "should"

124. Several experts considered that the term "should" in the English text should be replaced by "shall" or "must" in the model regulation, since the regulation would be annexed to a basic recommendation in which the term "should" would be used. It was also pointed out that the French version of the Recommendations used the term "doit" rather than "devrait" since it was chapter 1, rather than the form of the verb, which explained the scope and nature of the Recommendations. As in the case of a standard, whatever the form of the verb used, a model regulation would become binding only if its use were prescribed in a legal instrument and under the conditions specified in that instrument.

125. The representative of IMO explained that IMO only used the word "shall" in the context of a convention and that "should" was used in instruments which are recommendatory in nature.

126. Some experts questioned the use of the word "shall" throughout the future "model rule" which, annexed to a Recommendation, would remain of a recommendatory nature. They expressed the hope that interpretation would be checked for accuracy by the legal services of the United Nations and Governments.

127. The Sub-Committee endorsed the use of "shall" in the model rule.

Numbering system

128. The Sub-Committee expressed a preference for a complete numbering of the model regulation according to ISO standard 2145:1978 (in other words with the part as the principal division), rather than a partial application of that numbering system as in the ICAO Technical Instructions where the first level of numbering was the chapter within a part.

Systematic approach to the classification

129. The expert from the Netherlands introduced document ST/SG/AC.10/C.3/R.599 stating that this list was a presentation of the existing situation in the UN Recommendations, which might be improved. He said that inclusion of a systematic approach should be discussed in the second stage of reformatting. The inclusion of the list in the UN Recommendations at this time received no support. The Committee had already decided that such a list should not be included in the ninth edition of the Recommendations and should not be published separately (see ST/SG/AC.10/21, para. 89). The Committee had agreed to keep the question of the systematic grouping on the programme of work in the context of the reformatting.

130. The representative of France said that the aim of the systematic grouping should be to achieve, by means of a system of clearly defined generic entries, a considerable reduction in the number of entries, particularly for products which were seldom transported.

131. The representative of CEFIC said that a proposal for a systematic approach to classification had been made by the Working Group on restructuring RID/ADR to the RID/ADR Joint Meeting, and that a copy of the proposal was available for information purposes in document INF.20/Add.2.

132. Several experts considered that it would not be possible to deal with this question during the current biennium and that it would be preferable to postpone the work until the next biennium, on the basis of specific and carefully considered proposals.

133. The Sub-Committee agreed to keep document ST/SG/AC.10/C.3/R.599 as a reference document for future discussions when it was deemed appropriate to reconsider the question.

Two-step approach

134. The Sub-Committee accepted the two-step approach favoured by the Working Group, which involved staying close to the existing text and concentrating on the new format, then, as a second stage, adding provisions to the text (e.g., packing instructions) to complete the text as a model regulation.

Table of contents

135. The Sub-Committee considered the table of contents prepared by the Working Group (ST/SG/AC.10/C.3/R.625, annex 2), section by section, also in the light of the structure of the ICAO Technical Instructions and the draft table of contents of RID/ADR prepared by the Working Group on Restructuring RID/ADR and submitted by the secretariat for information purposes, in accordance with the principles applicable to the work of restructuring set out in the report of the Committee on its eighteenth session, annex 6, paragraph 11 (ST/SG/AC.10/21).

136. It was pointed out that the table of contents had been prepared to enable a basic text to be compiled for the next session of the Sub-Committee, on the understanding that the table of contents would subsequently be further refined in order to take account of the additions required to produce a model regulation.

Part 1

137. The Sub-Committee confirmed that a chapter on limited quantities should be kept in this part since it corresponded to the exemptions chapter which should appear in Part 1 of a model regulation.

138. The question of whether chapter 3 "Training of dangerous goods transport workers" should appear in part 1 was not decided and will have to be reconsidered.

139. A member of the secretariat said that, where the restructuring of RID and ADR was concerned, proposals had been made to include in this part requirements of a very general nature, reflecting the regulation as a whole and, in particular, explaining where specific classification, operational or construction requirements for packagings, tanks and vehicles could be found in the other parts of the regulation. He said that those proposals to some extent met the need to separate statutory requirements from technical requirements expressed in informal documents

INF.6 and INF.6/Add.1 submitted by Australia. They also included requirements for determining the respective obligations of the various parties involved in a transport operation.

Part 2

140. The Sub-Committee noted that, according to paragraph 24 (b) of the report, CEFIC had prepared a proposal for an introduction to this Part, which had been taken up by the Working Group on restructuring RID and ADR and could be found for information purposes in informal document INF.20/Add.1, section 2.1, and which could be submitted to the Sub-Committee with the necessary changes if adopted by the RID/ADR Joint Meeting.

141. A member of the secretariat asked whether the list of generic and n.o.s. entries which it was planned to include in Appendix A should not be included in Part 2. Opinions in this regard differed. Some experts considered that Appendix A corresponded to some extent to section 2.2.3.2 of information document INF.20/Add.2 and therefore concerned classification. Others considered that the list of generic or n.o.s. entries was irrelevant to classification and was useful only for the selection of the appropriate shipping name. Others considered that Appendix A should not have the status of a regulation and that reference could simply be made to it in Part 2 and/or Part 5 and the Sub-Committee agreed to that.

Parts 4 to 6

142. The Sub-Committee noted that there was a difference in how the parts were set out in the draft restructured RID/ADR and in the draft submitted by the Working Group.

143. The draft restructured RID/ADR provided for a fourth part including all the operational requirements referred to in the main table in Part 3, which were the subject of four chapters (chapter 4.1, packaging; 4.2, tanks; 4.3, consignment procedures; 4.4, transport equipment and operations).

144. In the draft restructured Recommendations, there was no provision for grouping the operational requirements in the same sections. The intention was to have specific parts according to the respective obligations of the various agents, as in the ICAO Technical Instructions (Part 4: packing/tanks: shipper's obligations; Part 5: consignment procedures; shipper's obligations; Part

6: transport operations: carrier's obligations). That structure also reduced the number of figures in the paragraph numbers.

145. None of the experts was in favour of the draft RID/ADR structure and the Sub-Committee kept to the Working Group's recommendations.

Numerical list in Part 3; layout of the table

146. The Sub-Committee confirmed that the layout of the table contained in Part 3 should conform to that set out in alternative 2 in document ST/SG/AC.10/C.3/R.619.

147. In answer to a question by the expert from Sweden, it was pointed out that there was a difference between the terms "provision" and "requirement", the latter indicating what must be done and the former being general in nature.

Modification of the system for the identification of dangerous goods (UN numbers)

Document: ST/SG/AC.10/C.3/R.614 (China)

148. The expert from China proposed a new five-figure numbering system, the first two figures of which would represent the hazard division; the system could be developed in the context of the systematic approach proposed by the expert from the Netherlands.

149. The majority of experts stressed the difficulties of implementing a change of this type in the system of UN numbers; the UN numbers were currently used worldwide in international transport, particularly in maritime and air transport, but also in national transport in the great majority of the industrialized countries and were the key to the implementation of emergency measures in the event of an accident. A change of such importance would therefore be very costly and would also require a lengthy period of adjustment on the part of emergency services.

150. The Sub-Committee proposed that the expert from China should coordinate his work with that of the expert from the Netherlands with a view to drafting a proposal which would take account of the possibility of grouping dangerous goods not only according to conditions of transport, but also according to the appropriate emergency measures for the various transport modes. That proposal could be put forward in the long term, once the ongoing work of global harmonization was complete, on the understanding that a revision of the current philosophy of the Recommendations should be accompanied by lengthy transitional periods to allow industry to

adapt.

Reformatting Australian Dangerous Goods Regulations

Informal documents: INF.6 and INF.6/Add.1

151. The observer from Australia explained the principles for the restructuring of regulations for the transport of dangerous goods currently nearing completion in his country. In particular, he stressed the need to keep statutory requirements quite separate from technical requirements, and to define the obligations of the various parties involved so that the legislation could be applied.

152. The Sub-Committee welcomed the work done by the Australian Government to implement the United Nations Recommendations. It was pointed out that the aim of restructuring the Recommendations as model regulations was not to set up a model legal instrument, but to introduce standard regulations for technical requirements to which reference could be made or which could be annexed to such instruments.

Work of the Working Group on the restructuring of ADR and RID

Informal documents: INF.20 and -/Add.1 to -/Add.3

153. A member of the secretariat recalled that these documents had been prepared solely for information purposes so as to permit effective cooperation in moving ahead with the work.

154. The expert from Germany said that informal document INF.20/Add.3 contained some 40 packing tables corresponding to approximately 90% of the current requirements of RID/ADR, but that a reduction in the number of those tables to approximately 15 was envisaged, following consultations with chemists and competent packing specialists.

155. The expert from the United States said that the tables, which represented packing instructions, could be the subject of a formal proposal by the RID/ADR Joint Meeting as a basic document for discussing an addition to the Recommendations in the second stage of the work on reformatting.

156. Several experts considered that account should also be taken of the packing instructions contained in the ICAO Technical Instructions and the IMDG Code.

Future work (restructuring)

157. The representative of HMAC confirmed that he would prepare a new consolidated text of the restructured Recommendations, in accordance with the Sub-Committee's decisions, for the next session.

IMPLEMENTATION OF AGENDA 21

General

Documents :	Informal document INF.14 (secretariat)	Report - IPCS Coordinating Group for the harmonization of systems of classification and labelling
	Informal document INF.15 (secretariat)	Report of the first meeting of the intersessional group of the Intergovernmental Forum on Chemical Safety
	E/1995/56	Report of the Secretary General to ECOSOC on the work of the Committee
	E/1995/66	Report of the Secretary General to ECOSOC on the work concerning products harmful to health and environment

158. The Sub-Committee took note of the information provided by the secretariat on the activities of various bodies involved in the implementation of the programme of action contained in chapter 19 of Agenda 21.

159. The Sub-Committee also noted that the two draft resolutions prepared by the Committee (ST/SG/AC.10/21, annex 5 and E/1995/56) were adopted as drafted by the Economic and Social Council at its substantive session of 1995 (Forty-fourth meeting, 19 July 1995).

160. The representative of ILO made an oral report on the work of the IPCS Coordinating Group for the harmonization of chemical classification systems, and explained the last conclusions of the group at the meeting which took place in Geneva on 26 and 27 June 1995. He said that

this group should no longer be referred to as the "IPCS" Coordinating Group but as the IOMC (Interorganization Programme on Sound Management of Chemicals) Coordinating Group.

161. Several delegations expressed concern at the lack of clarity as to the status of the IOMC Coordinating Group for the harmonization of chemical classification systems. The Sub-Committee noted that the secretariat of the UN/ECE is participating in the work of the Coordinating Group on behalf of the Committee in order to facilitate cooperation between various organizations in the field of harmonization, but that there is no formal link between the group and other international bodies, including the UN/ECE or the Committee of experts, as to the decision making process.

162. The Sub-Committee noted that the second meeting of the Intersessional Group of the Intergovernmental Forum on Chemical Safety would take place in Canberra (Australia), in the first week of March 1996. The Sub-Committee, considering that it should be represented at that session, agreed to invite the observer from Australia to attend that meeting on its behalf, with a mission to explain, as necessary, the role of the Committee of Experts, its activities and its achievements.

Document : ST/SG/AC.10/C.3/R.636 (Argentina)

163. The Sub-Committee agreed that the terms used for describing similar types of danger should be harmonized as far as possible. The representative of ILO said that the OECD had started work on the harmonization of terms and that the subject will be addressed by the IOMC Coordinating Group. He hoped that the Sub-Committee would also contribute to that effort of global harmonization of definition of terms.

Harmonized classification criteria for reactive substances and for flammable substances

Documents : ST/SG/AC.10/C.3/R.610 (United Kingdom)	(Proposal for harmonized classification criteria for reactive substances)
ST/SG/AC.10/C.3/R.617 (Germany)	(Proposal for harmonized classification criteria for flammable substances)
ST/SG/AC.10/C.3/634 (Germany)	(Questionnaire concerning systems of classification for flammable liquids)
ST/SG/AC.10/C.3/R.620 (United States) (Canada)	(Harmonized criteria for flammable liquids)
ST/SG/AC.10/R.493 (ILO)	(Report - Ottawa workshop)
ST/SG/AC.10/C.3/R.590 (United States)	(Classification of aerosols with subsidiary

	risks)
Informal document INF.9 (Secretariat)	(Agenda for the working group on harmonized criteria for reactive materials)
Informal document INF.10 (CEPE)	(Flammable liquids)
Informal document INF.16 (Germany)	(Criteria for flammable liquids)

164. In accordance with the decisions of the Committee (ST/SG/AC.10/21, paras. 144 to 154), two working groups were established in the context of cooperation with ILO, IOMC and follow-up to the United Nations Conference on Environment and Development (UNCED) (Agenda 21, chapter 19, Programme area B), in order to develop proposals for globally harmonized classification criteria for reactive substances and for flammable materials.

165. The Working Group on harmonized classification criteria for reactive substances met at ILO Headquarters from 12 to 14 July under the chairmanship of Mr. R. Woodward (United Kingdom) and the Working Group on harmonized classification criteria for flammable substances met in the Palais des Nations from 17 to 18 July under the chairmanship of Mr. G. Oberreuter (Germany). The reports of these groups are reproduced in document ST/SG/AC.10/C.3/20/Add.2

166. The expert from the United States cautioned the Sub-Committee that the criteria for explosives considered by the Working Group on harmonized classification criteria for reactive substances may lead many industrial chemicals not classified as explosives to be so classified.

167. It was agreed that these groups should meet again at the December 1995 session of the Sub-Committee. Proposals will be made on the basis of the conclusions reached at this session. These proposals should be received by the secretariat at the latest by 22 September so that they may be translated and circulated in time to members of the groups.

Harmonized classification criteria for toxicity and corrosivity

Informal document: INF.17 (Secretariat)	Record of the 1st meeting of the OECD Advisory Group on Harmonization of classification and labelling systems

168. The Sub-Committee noted that OECD had established an advisory group on harmonization of classification and labelling. It also noted the work programme of that group as regards criteria for toxicity, corrosivity and danger to the environment.

169. Paragraph 8 of the report suggested that the consequences of adopting an harmonized classification system for a set of well-known and already classified chemicals should be evaluated. Several experts recalled that in principle already classified chemicals should not be reclassified. A member of the secretariat said that already classified chemicals represent the great majority of dangerous goods most commonly carried, and that the exercise of global harmonization might have a very limited practical effect if it did not concern this vast majority of already classified chemicals. The Chairman invited the experts to think of this question.

170. Considering views expressed by the expert from India on a need to develop hazardous materials indices, the Chairman suggested that she should first prepare a written proposal on the subject, which could be considered at a future session.

Informal document INF.33 (Germany) (Inhalation toxicity)

171. This document will be presented to the next session of the Sub-Committee as an official proposal.

Harmonized classification criteria for danger to the environment

Documents: ST/SG/AC.10/R.473 (Germany)

ST/SG/AC.10/C.3/R.635 (United Kingdom)	Report of the Working Group on criteria for danger to the environment
Informal document INF.17	Record of the 1st meeting of OECD Advisory Group on Harmonization of classification and labelling systems)
Informal document INF.19	ICME position

172. The Sub-Committee considered the report of the informal working group on criteria for danger to the environment which met at IMO Headquarters in London from 2 to 4 May 1995, in particular the recommendations made in paragraph 57.

173. As regards the recommendation 57.4 that self-classification of substances, solutions and mixtures should be permissible under a harmonized scheme, the representative of HMAC would prefer to have an exhaustive list of substances presenting a danger to the environment. The expert of Belgium also preferred such a list for facilitating control.

174. The experts from the United States and Germany said that they did not understand why the

principle of self-classification adopted for toxicity (division 6.1) and other hazard classes could not apply to ecotoxicity. Exhaustive lists could be very long and would imply additional meetings of experts for regular up-dating. Some experts shared that view.

175. The Sub-Committee endorsed the recommendations of the Working Group and, as some of these recommendations concerned other organizations or bodies (IMO, GESAMP, OECD and EC), hoped that these bodies would also respond to the report. The representative of IMO confirmed that this report would also be submitted to GESAMP and the other relevant IMO bodies.

Hazardous wastes

Documents: UNEP/CHW/WG.4/7/8
UNEP/CHW/WG.4/8/5 Reports of the UNEP Technical Working Group on the environmentally sound management of hazardous wastes

176. The Sub-Committee took note of the reports of the UNEP Technical Working Group on the environmentally sound management of hazardous wastes subject to the Basel Convention, in particular as regards the development of definitions for the characteristics H1 to H13 of Annex III of the Basel Convention.

177. The representative of UNEP (Secretariat of the Basel Convention) explained that, as there were 88 Contracting Parties to the Basel Convention, it had become necessary to make quick progress in solving technical problems related to the implementation of the Convention so that it could become an effective instrument.

178. He explained that, to classify wastes as hazardous wastes, the first step was to consider whether they possessed hazardous characteristics according to the Annex III of the Convention (Codes H1 to H13); the second step was to check whether they belong to a category of wastes to be controlled (i.e. to waste streams Y1 to Y45 of Annex 1 of the Basel Convention). Therefore certain wastes, considered as dangerous according to the transport regulations, might not be subject to the Basel Convention if they did not belong to a waste stream to be controlled.

179. He said that tables 1 to 4 appended to document UNEP/CHW/WG.4/8/5 had been developed for guidance purpose in order to indicate those waste streams which are to be considered as always hazardous (except if it can be proven by the use of criteria of Annex III that they are not), those which may be considered as sometimes hazardous (in which case the use of

the criteria of Annex III is more relevant), and those which are not deemed to be subject to the Basel Convention (even if they meet the criteria of Annex III) (Table 4).

180. He also said that in principle the criteria of categories H1 to H8 are deemed to correspond to those of classes 1 to 8 of the UN Recommendations, although some adjustments might be necessary in some cases (explosives and infectious substances). He underlined that cooperation with the Committee of experts was essential as the Contracting Parties relied on its work.

181. The work of the technical Working Group will be submitted to the 3rd Conference of the Contracting Parties to the Basel Convention, to be held in Geneva from 18 to 22 September 1995.

182. The expert from Germany said that the work of the Committee as regards harmonization of criteria for reactivity and for danger to the environment should be of interest to the UNEP technical Working Group for the development of criteria for characteristics H10 and H12 respectively.

183. The expert from India regretted that even though a system was in place under the Basel Convention for classification of hazardous wastes, confusion prevailed especially as other concepts (OECD green/yellow/red lists) were still in use in some countries.

184. The Chairman hoped that, as there were now 88 Contracting Parties to the Basel Convention, more resources would be spent in future for rendering the Convention effective in an harmonized way, including for movement between OECD countries.

Informal document : INF.23 (CEFIC)

185. The Sub-Committee took note of the discussion paper on the definition of wastes.

Hazard communication

186. The Sub-Committee noted that the IOMC Coordinating Group had established a working group on chemical hazard communication which should address the harmonization of labelling of chemicals, including label elements, colours, pictograms, precautionary statements and forms of presentation; the harmonization of the design of chemical safety data sheets, including data elements, comprehension and standardization of phrases; and guidelines and principles for training on hazard communication. The draft terms of reference of the group were circulated, together with a questionnaire that the secretariat had been requested to fill on behalf of the

Committee.

187. Several experts expressed concern at the fact that they had not been made aware of that initiative and they said they would have to consult the representatives of their Labour Ministry. They underlined the need for the Committee to be involved in that process.

188. A member of the secretariat said that the meeting of that group only took place one week before to this Sub-Committee session and the questionnaire had just been sent also to him and the representatives of the Ministries of Labour of the United States, Australia and Japan, as well as to the European Commission. He intended to provide ILO with a comprehensive document on behalf of the Committee covering also modal aspects which would be developed in cooperation with IMO and ICAO. The answers to the questionnaire would be analyzed by an ILO consultant who would prepare a report to the intention of the Working Group expected to meet at the end of November 1995.

189. The secretariat was requested to keep the Sub-Committee informed of these activities.

OTHER BUSINESS

Periodicity of amendments - working methods of the Committee

Documents: ST/SG/AC.10/R.501 (Germany)
ST/SG/AC.10/R.502 (Argentina)
ST/SG/AC.10/R.503 (Austria)

190. As these matters were considered to be of relevance to the Committee and not to the Sub-Committee, experts were invited to consider these documents carefully for the Committee session in 1996.

191. The representative from IMO, while recognizing that the issue of periodicity of amendments to the UN Recommendations was not on the agenda for the Sub-Committee sessions, informed the Sub-Committee of the outcome of discussions on the issue at the May 1995 session of IMO's Maritime Safety Committee (MSC). MSC recognizing the problems being faced by industry and many of the IMO member countries in implementing and enforcing frequent changes to the Recommendations, had upheld its decision on maintaining a four-year cycle for amendments to the IMDG Code. She informed the Sub-Committee that IMO would again raise this issue with the UN Committee of Experts in December 1996 but in the interim IMO would be

raising its concerns with the Economic and Social Council in New-York. She drew attention to the fact that during the last session of the ECE Working Party on the Transport of Dangerous Goods (WP.15) some delegates had indicated to her that the frequency of amendments to the UN Recommendations would put a great burden on them for translating the new provisions of ADR into their national languages. The IMO representative hoped that, in view of all that is being achieved in the context of Chapter 19 of Agenda 21 and global harmonization, this issue, which, for IMO, remains a major stumbling-block, will be carefully considered by the Committee of Experts and that some form of compromise will be achieved. She also explained that because the MSC had not accepted to continue the two year cycle of amendments, it had not taken a decision on the date of implementation for the next amendment to the IMDG Code. She indicated that since there is no session of MSC before May 1996, even if at that time the Committee accepted an implementation date of 1 January 1997 to maintain alignment with ADR/RID, it would be practically impossible for the IMO Secretariat to prepare the amendment in all three working languages in sufficient time and a transitional period would again be necessary.

Application by the International Council on Metals and the Environment (ICME) for consultative status

Document : ST/SG/AC.10/C.3/R.637 (Secretariat)

192. The Sub-Committee agreed that ICME could participate in its work with consultative status.

Revision of ECE/FAL Recommendation No.11

Documents:	TRADE/WP.4/GE.2/99	Report of the 51st session of the UN/ECE meeting of experts on procedures and documentation
	TRADE/WP.4/R.1168	Revision of ECE/FAL Recommendation No.11

193. The Sub-Committee noted that the multimodal dangerous goods form developed by the UN/ECE Meeting of experts on procedures and documentation had been designed to take account specifically of the differences existing between the various regulations applicable to the transport of dangerous goods by various modes of transport in Europe (IMDG Code, ICAO Technical Instructions, ADR and RID). Therefore this form was no longer a recommended form based on the provisions of Chapter 13 of the Recommendations on the Transport of Dangerous Goods but a model form based on existing european regulations. If this revised Recommendation No.11 was adopted, the present reference to it in Chapter 13 should be deleted.

194. As a consequence, the Sub-Committee considered that this Recommendation No.11 could no longer be transmitted by the Executive Secretary of the Economic Commission for Europe to ECE Governments and other Governments through the Executive Secretaries of other United Nations regional economic commissions, but only to ECE Governments which are Contracting Parties to ADR.

195. The expert from Germany added that such a form could lead to practical problems especially in regional transport operations. He further said that this Recommendation failed also to recognize that for rail transport in Europe (RID), a specific document is required by the COTIF Convention and that in practice this multimodal dangerous goods form could not be legally used for rail transport and that any change in documentation would need an amendment of the COTIF Convention itself.

196. Attention of the ECE Meeting of experts on procedures and documentation should be drawn to the present work of reformatting the UN Recommendations into a model regulation.

Use of electronic media for transmitting documents

Informal Document: INF. 21 (Secretariat)

197. The Sub-Committee was informed of the new possibilities to communicate with the secretariat through the INTERNET network. Experts were requested to respond to the questionnaire on INTERNET addresses annexed to document INF.21.

FUTURE WORK PROGRAMME

198. The Sub-Committee agreed to the following programme for the eleventh session (4 to 15 December 1995):

First week

(1) Review of Chapter 12 and of the multimodal tank tables
(2) Reformatting of the Recommendations on the Transport of Dangerous Goods
(3) Review of Chapter 15 (Dangerous Goods in limited quantities)
(4) ISO work on standards for gas cylinders and quality assurance
(5) Routine listing and classification
(6) Packagings and Intermediate Bulk Containers (IBCs)

(7) Infectious substances

Second week

(8) Implementation of Agenda 21
  (a) General
  (b) Harmonized classification criteria for reactive substances
  (c) Harmonized classification criteria for flammable substances
  (d) Harmonized classification criteria for toxicity
  (e) Harmonized classification criteria for corrosivity
  (f) Harmonized classification criteria for danger to the environment
  (g) Labelling and hazard communication systems
  (h) Hazardous wastes
  (i) Other matters
(9) Relations with other organizations
(10) Other business

199. The deadline for submission of proposals is 22 September 1995. Documents not received by the secretariat by that date may be carried forward to the twelfth (July 1996) session of the Sub-Committee.

200. The following documents were carried forward to the next session:

ST/SG/AC.10/C.3/R.552, -/C.3/R.570, -/C.3/R.608, -/C.3/R.610, -/C.3/R.616, -/C.3/R.617, -/C.3/R.618, -/C.3/R.621, -/C.3/R.624, -/C.3/R.635, -/C.3/R.642, -/C.3/R.645, -/C.3/R.646.

INF.4, INF.5, INF.33

ST/SG/AC.10/R.472, -/R.473, -/R.590, -/R.591, -/R.493

For reasons of economy, these documents will not be reprocessed by the secretariat, therefore delegations are invited to keep their own copy and to bring them to the meeting.

201. The following documents were carried forward to the twelfth session (July 1996).
ST/SG/AC.10/R.460, -/R.499, -/R.471,

ST/SG/AC.10/C.3/R.529, -/C.3/R.595, -/C.3/R.601, -/C.3/R.602, -/C.3/R.604, -/C.3/R.605, -

/C.3/R.606, -/C.3/R.613, -/C.3/R.641,

INF.12, INF.13, INF.24, INF.25, INF.30.

ADOPTION OF THE REPORT

202. The Sub-Committee adopted the report on its tenth session together with its annexes.

Annex 1

DRAFT AMENDMENTS TO THE RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

CHAPTER 2: LIST OF DANGEROUS GOODS MOST COMMONLY CARRIED

Delete the word ", COMMERCIAL" from the description of the following entries:
0059, 0439, 0440, 0441.

UN 2344 Add special provision "184" in column (b3) and delete Packing group "II" in column (c1).

UN 3147 Change special provision "184" in column (b3) to "185".

UN 3257 Add at the end of the name and description in column (a2) the words: "(including molten metals, molten salts, etc.)"

CHAPTER 3: SPECIAL PROVISIONS RELATING TO INDIVIDUAL SUBSTANCES AND ARTICLES

230 Delete subparagraphs (f) and (h)-(l).

Existing (a) becomes (b).

Insert a new (a) as follows:
"(a) each cell or battery type has been determined to meet the criteria for assignment to Class 9 on the basis of tests carried out in accordance with the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, sub-section 38.3;"

Existing (b) becomes (c).

Existing (c) becomes (d) with the deletion of the words "in such a manner as".

Existing (d) becomes (e).

Existing (e) becomes (f).

In subparagraph (g) delete the words "in such a manner as".

CHAPTER 4: SPECIAL RECOMMENDATIONS RELATING TO CLASS 1

4.9 In the definition for the entry "*CHARGES, SHAPED, COMMERCIAL* without detonator" delete the word ", *COMMERCIAL*".

Table 4.4

Delete the word ", commercial" in the following entry:

"Charges, shaped, commercial without detonator: 0059, 0439, 0440, 0441

CHAPTER 9: GENERAL RECOMMENDATIONS ON PACKING

9.2.1 In the definition of "reconditioned packagings" insert "(a)" before "metal drums" and add a new subparagraph (b) as follows:

"(b) plastics drums and jerricans that:

(i) are cleaned to original materials of construction, with all former contents, external coatings and labels, and durable markings removed;

(ii) have all non-integral gaskets replaced; and

(iii) are inspected after cleaning with rejection of packagings with visible damage such as tears, creases or cracks, or damaged threads or closures."

Insert at the appropriate place a definition for "Recycled plastics material" as follows:

["*Recycled plastics material* means material recovered from used industrial packaging that has been cleaned and prepared for processing into new packagings. The specific properties of recycled plastics material used for production of new packagings should be assured by appropriate pre-sorting and should be proved regularly as part of a quality assurance programme recognized by the competent authority."]

9.6.7.1 Amend the beginning of the second sentence as follows:

["Except as provided in 9.6.7.8, no....(rest unchanged)"]

Amend the beginning of the last sentence as follows:

["Any permeation of the substance contained in the package, or recycled plastics material used to produce new packaging, should...(rest unchanged)"]

[9.6.7.8 Renumber existing text as 9.6.7.9.]

Insert a new text as follows:

["Recycled plastics material as defined in 9.2.1 may be used to produce new plastics drums and jerricans."]

[9.6.7.9 Renumber as 9.6.7.10.]

CHAPTER 16: RECOMMENDATIONS ON INTERMEDIATE BULK CONTAINERS (IBCs)

The text is replaced by the text in ST/SG/AC.10/C.3/R.616.

CHAPTER 12 AND INDEX:

Amend chapter 12 and the index as necessary to reflect the changes adopted for chapter 2.

Annex 2

UN Test 6 (c)

Programme of action

Conclusions of the ad-hoc group of experts

(Refer to paragraphs 50 to 54 of the report)

A ad hoc group of experts was convened on 11 July 1995, to consider the recommendations put forth in Information Paper INF.8 which was transmitted by OECD-IGUS.

Participants included representatives from Australia, Canada, France, Germany, Italy, Japan, Netherlands, Norway Sweden, United Kingdom and United States, as well as CEFIC and HMAC. The meeting was chaired by the expert of the United States.

Proposal No.1: The Sub-Committee was invited to decide if the definition in paragraph 1.11 does reflect the underlying philosophy behind the 1.4S classification. If not, then a change in definition should be considered.

Conclusion of the group

Paras. 1.11 and 1.12 of the Recommendations were agreed to reflect the underlying philosophy behind the 1.4S classification. The group agreed that an editorial revision was needed for clarifying the distinction between Divisions 1.4S and 1.4. The expert from France agreed to offer a proposal for the twelfth session of the Sub-Committee in July 1996. The matter of hazards to emergency responders was discussed at length. It was agreed that the term "fire-fighting" could include fire-fighting by persons with or without protective clothing. It was agreed that the term "no significant hazard" implied no significant hazard for all emergency responders. Projections and thermal effect criteria related to these concerns were also discussed.

Proposal No.2 : The Sub-Committee was invited to decide if the criteria do reflect the underlying philosophy behind the 1.4S classification. If not, then a change of criteria should be considered.

Conclusion of the group

The group agreed that the existing criteria do not reflect the underlying philosophy behind the Division 1.4S classification. It was agreed that this was a matter for discussion in a future working group. Papers ST/SG/AC.10/C.3/R.602 (Canada), -/R.613 (France) and -/C.3/R.641 (United States) and INF.12, INF.13, INF.24 and INF.25 address this issue and will be included in the future

discussions.

Proposal No.3 : The Sub-Committee was invited to decide whether the demarcation between the various classifications within Class 1 is clear enough on the basis of the criteria. If not, then a change in the description of the criteria should be considered.

Conclusion of the group

The group agreed that the existing criteria for demarcations between the various classifications is not clear, and changes should be considered. As in proposal No.2, this was a matter for discussion in a future working group, including papers ST/SG/AC.10/C.3/R.602, -/C.3/R.613, and -/C.3/R.641 and INF.12, INF.13, INF.24 and INF.25 as a basis for discussion.

Proposal No.4: The Sub-Committee was invited to deal with the problem of the existing 1.4S classification in respect to carriage in passenger aircraft of perforating articles and ammunition.

Conclusion of the group

The group agreed that, while carriage aboard passenger aircraft may present a special situation, criteria should define all modes. Such air transport may continue to require special packaging and quantity limitations, but need not affect classification.

Proposal No.5: The Sub-Committee was invited to deal with the current responses to the points raised by ST/SG/AC.10/C.3/R.529.

Conclusion of the group

This recommendation was not discussed.

General conclusion

The group concluded that the point raised in proposal No.3 was an important subject, requiring thorough consideration of experts from all countries. Papers were invited for future discussion. It was agreed that a future UN working group could be convened in July 1996, but not in December 1995. The scope of effort would be determined by the number of papers offered for discussion.